

Sk Babul Akhtar

+91 9830675247

babul.akhtar322@gmail.com

Devoke, Mamudpur, Naihati, North 24 Parganas, 743166



SUMMARY

Looking to share my knowledge and skills in the field of academics. Focused on communicative teaching and time management approach. Dedicated to helping individual student exceed potential and achieve success.

SOFT SKILLS

- Tutoring and Coaching
- Class Engagement
- Student-Centered Learning
- Problem-Solving
- Project Management
- Analytical Thinking

TECHNICAL SKILLS

- **Programming & Concepts:** Python, Java, C, SQL, OOP, Data Structures & Algorithms, DBMS
- **Backend & Web Development:** Spring Boot, Servlets, JDBC, REST APIs, Angular, MySQL
- **Research:** Adaptive Driving Beam (ADB), Object Detection & Tracking, Kalman Filter, Precise Point Positioning (PPP), AI/ML Fundamentals
- **Other Technical Skills:** IoT, Cadence Virtuoso, Embedded Systems

SUBJECTS TAUGHT

- Python Programming
- Object Oriented Programming (OOP)
- Database Management Systems
- Data Structures and Algorithms
- C Programming
- Computer Networks
- Digital Electronics
- Analog Electronics
- Circuit Theory
- Microprocessors & Microcontrollers

PROFESSIONAL EXPERIENCE

Asst. Professor | 07/2023 – Current,
Dept. of ECE, Swami Vivekananda University, Kolkata 700121

- Conducted hands-on workshops on IoT, FPGA, PCB Design, and IC Design for students.
- Guiding undergraduate research and project work in embedded systems and IoT.

Junior Research Fellow | 03/2022 – 06/2023,
ISRO Respond Project, Jadavpur University & IIIT Delhi

- Worked on Precise Point Positioning of LEO Satellite problem and successfully achieved the desired accuracy in position tracking.
- Evaluated data from advanced research studies to improve the process model and measurement model of the system.
- Developed a Python application to successfully run the designed Precise Point Positioning Kalman filter based algorithm.

PROFESSIONAL EXPERIENCE

System Engineer | 07/2021 – 10/2021,
Infosys, Bhubaneswar, India

- Contributed to the development of a multimedia OTT application using Java and Apache Spring based technologies.

Assistant System Engineer | 06/2019 – 09/2020,
Tata Consultancy Services, Kolkata, India

- Developed and maintained frontend modules using Angular; resolved production bugs across Java and Spring based enterprise systems.

EDUCATION

M. E. in Electronics and Telecommunication Engineering, 2021–2023, DGPA: 9.44
Jadavpur University, Jadavpur, Kolkata, West Bengal 700032

- Successfully defended M.E. thesis titled: "Some Studies on Object Tracking using Kalman Filter and Tuning of Process Noise Covariance Parameter for Optimal System Performance".

B. Tech in Applied Electronics and Instrumentation, 2015–2019, DGPA: 7.96
Academy of Technology, Adisaptagram, Hooghly, West Bengal 712502

- Presented final year project on "Smart Home Security System using IoT".

Higher Secondary, 2015, Best of four percentage: 82%
St Luke's Day School, Naihati, 743165

Secondary, 2013, Best of five percentage: 76.2%
St Luke's Day School, Naihati, 743165

ACHIEVEMENTS

- Secured AIR 1126 in GATE 2021 (Instrumentation Engineering)
- Earned Elite Certification for "Programming, Data Structures And Algorithms Using Python" and "Introduction to Programming in C" from NPTEL.
- Conducted various workshops on PCB Design, FPGA, IoT, IC Designing, etc.
- Authored numerous journal articles, book chapters, and conference papers. (Google Scholar ID: https://scholar.google.com/citations?user=vQi_tMkAAAAJ&hl=en)

OTHER DETAILS

Languages

English, Bengali, Hindi

Date of Birth

17th March 1998

Hobbies

Football, Photography, Poetry

REFERENCES

Dr. Parthasarathi Satvaya

Director & Assistant Professor,
School of Illumination Science,
Engineering & Design,
Jadavpur University
+91 9002165688
parthasatvaya@gmail.com

Dr. Ratna Ghosh

Professor, Department of
Electronics and
Instrumentation,
Jadavpur University
+91 9674947291
ratnand@gmail.com

Dr. Hiranmoy Mondal

Associate Professor,
Department of Electrical &
Electronics Engineering,
Academy of Technology
+91 9477003562
hiranmoy.mandal@aot.edu.in

LIST OF PUBLICATIONS

- S. B. Akhtar, A. Ghatak, B. Jana, T. S. Sannyashi, T. Sinha Roy and S. Ghosh, "FPGA-Based PWM Controller for Motor Speed Control on Xilinx Spartan-7," 2025 International Conference on Sustainable Technology in Energy and Power Systems (STEPCon), Kolkata, India, 2025, pp. 156–161, doi: 10.1109/STEPCon66008.2025.11473402.
- T. S. Sannyashi, S. B. Akhtar, T. S. Roy, B. Jana and S. Ghosh, "Performance Analysis of Differential Amplifiers Using Cadence with GPDk45, GPDk90, and GPDk180," 2025 Devices for Integrated Circuit (DevIC), Kalyani, India, 2025, pp. 68–73, doi: 10.1109/DevIC63749.2025.11012415.
- S. B. Akhtar, S. Dhabal and P. Venkateswaran, "Kalman Filter based Optimized Object Tracker with Auto-tuning of Process Noise Covariance Parameter and Performance Verification," 2023 14th International Conference on Computing Communication and Networking Technologies (ICCCNT), Delhi, India, 2023, pp. 1–6, doi: 10.1109/ICCCNT56998.2023.10307617.
- S. B. Akhtar, "Kalman filter based multiple object tracking using Hungarian algorithm and performance tuning using RMS index," in Recent Advancements in Computational Intelligence and Design Engineering, 1st ed. London, UK: CRC Press, 2025, pp. 6.
- S. B. Akhtar, R. Ray, and T. S. Sannyashi, "Adaptive Kalman Filtering for Dynamic Systems with Nonlinearities," Journal of Innovation and Advancement in Electronic Frontier, vol. 1, no. 2, pp. 7–14, Nov. 2025, doi: 10.65525/jaief.v1i2.8.